REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 11-24 are pending in the application.

Basis for new claims 11-24 can be found in the originally filed application including at original claims 1-10. The claims have been amended to recite active process steps. No new matter has been added. The amendments to the claims are merely cosmetic and do not reduce the breadth of the originally filed claims in any way. The full doctrine of equivalents applies to all claims. No new matter has been added by these amendments.

The rejection of claims 9 and 10 (now claims 22-24) under 35 U.S.C. § 112, first paragraph, at paragraph 1, page 2 of the Office Action, is obviated by the amendment to the specification as set forth above. The specification has been amended at page 4 to disclose the process step of original claim 9. No new matter has been added. Accordingly, withdrawal of the Section 112 rejection is respectfully requested.

The rejection of claims 9 and 10 (now claims 22-24) under 35 U.S.C. § 112, second paragraph, at paragraph 2, page 2 of the Office Action, is obviated by the amendments to the claims as set forth above. Applicant submits that the claimed invention fully complies with Section 112. Accordingly, withdrawal of the Section 112 rejection is respectfully requested.

The rejection of claims 1 and 3-8 (now claims 11 and 14-21) under 35 U.S.C. § 103 as being unpatentable over U.S. patent No. 6,062,547 (Nilsson) in view of PCT WO01/27384 (PCT '384) is respectfully traversed. The claimed invention is not obvious from the theoretical combination of Nilsson and PCT '384 for the following reasons.

The claimed invention utilizes an essentially water-free based liquid as a cooling medium within the gasification vessel. The Examiner admits on pages 3-4 of the Office Action that Nilsson does not teach the use of the essentially water-free cooling medium that is at least partly vaporized or cracked, whereby the vaporized/cracked cooling medium is drawn off together with the phase of flammable gaseous material, and the cooling medium after vaporizing/cracking increases the calorific value of the flammable

gaseous material relative to the calorific value of the flammable gaseous material without addition of the essentially water-free cooling medium. In fact, Nilsson teaches to use a water based cooling medium. See column 3, lines 38-45.

PCT '384 does not supply the deficiencies of Nilsson. PCT '385 does not relate to optimisation of the gasification process as such, but rather how to handle electrical filter ash, which is a problematic product, by means of gasification. In this context, PCT' 384 suggests using different kinds of support fuels, i.e. methanol. See page 4, lines 14-31 of PCT '384. PCT '384 actually teaches to use a water based cooling medium in the same manner as Nilsson. In PCT '384 there are numerous references to other patents relating to a gasification process, many in the name of Chemrec, all of which use a water based cooling media. See pages 2 and 3 of PCT '384. Thus, PCT '384 in fact teaches to use water based cooling media in a gasification process.

See Fig. 1 of the present invention in which the essentially water-free cooling medium 9 is added to the stream leaving the burner 5. The essentially water-free cooling medium 9 is not added to the burner 5. See page 4, line 25 to page 5, line 9 of the present specification. Compare this with Figs. 1 and 2 of PCT '384, in which the support fuel is added to the burner (reactor 1). See page 7, lines 37-39 of PCT '384. Adding a support fuel to a burner (PCT '384) is very different from adding a water-free cooling medium to the stream leaving the burner to thereby cool the stream (present invention). Thus, the combination of Nilsson and PCT '384 cannot teach or even suggest using an essentially water-free medium to cool the stream leaving the burner.

In view of Nilsson and PCT '384 both teaching to use a water based cooling medium, which is against the claimed invention, and the combination of references not teaching to cool the stream leaving the burner with an essentially water-free cooling medium, withdrawal of the Section 103 rejection is respectfully requested.

The rejection of claim 2 (now claims 12 and 13) under 35 U.S.C. § 103 as being unpatentable over Nilsson in view of U.S. patent Nos. 4,808,264 (Kignell) and 4,773,918 (Kohl) is respectfully traversed. The claimed invention is not obvious over the combination of Nilsson, Kignell and Kohl for the following reasons.

Applicant respectfully submits that the Examiner is once again confusing a "support fuel" with a cooling medium. As in PCT '384, Kignell teaches to use a "support fuel such as oil or gas to said reactor." See column 1, line 67 to column 2, line 2 of Kignell. In contrast, in the claimed invention the essentially water-free medium is added to the stream leaving the burner (reactor) to thereby cool the stream.

Kohl also teaches to use a support fuel by stating that the "product gas heating value can be increased, if desired, by introducing a high heating value fuel such as oil or petroleum coke into the gasification zone." See column 7, lines 48-54 of Kohl. The gasification zone is the burner. In contrast, in the claimed invention the essentially water-free medium is added to the stream leaving the burner (reactor) to thereby cool the stream.

Since both Kignell and Kohl only teach to supply the support fuel to the burner, the combination of Nilsson and PCT '384 cannot teach or even suggest using an essentially water-free medium to cool the stream leaving the burner.

Both Kohl and Kignell teach to cool the stream leaving the burner in same manner as Nilsson. See column 6, lines 48-50 of Kohl, which teaches to use a water based cooling medium for the stream leaving the burner. See column 2, lines 8-20, which teaches to use a based cooling medium for the stream leaving the burner. Since all three cited references teach to use a water based cooling medium, the combination must also teach to use a water based cooling medium.

In view of all three cited references teaching to use a water based medium, which is against the claimed invention, and the combination of references not teaching to cool the stream leaving the burner with an essentially water-free cooling medium, withdrawal of the Section 103 rejection is respectfully requested.

The rejection of claims 9 and 10 (now claims 22-24) under 35 U.S.C. § 103 as being unpatentable over Nilsson in view of PCT '384 as applied to claim1 and further in view of Kohl is respectfully traversed. The claimed invention is not taught or suggested by the combination of Nilsson and PCT '384 for the many reasons provided above. Kohl does provide the many deficiencies of Nilsson and PCT '384. The combination of all three references at best only teaches to supply a support fuel to the burner. None of the cited references teaches or even suggests supplying an essentially water-free cooling medium to

the stream leaving the burner. For this reason alone, the Section 103 rejection should be withdrawn.

Kohl also does not teach or suggest a solution to the problem of carbonation of boiling and splashing green liquor from the product liquid receiver. For this reason alone, the Section 103 rejection should be withdrawn.

In view of all of the rejections of record having been addressed, Applicant submits that the present application is condition for allowance and Notice of such is respectfully requested.

Respectfully submitted,
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